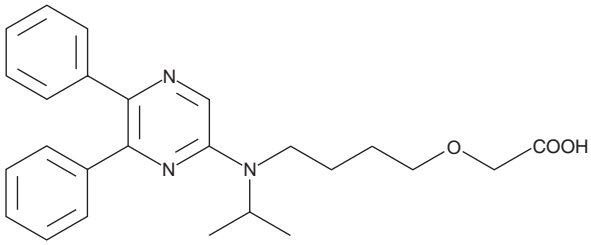
PRODUCT INFORMATION

MRE-269

Item No. 10010412

CAS Registry No.:	475085-57-5
Formal Name:	[4-[(5,6-diphenylpyrazinyl)(1-methylethyl)amino]butoxy]-acetic acid
MF:	$C_{25}H_{29}N_3O_3$
FW:	419.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 231, 299, 366 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MRE-269 is supplied as a crystalline solid. A stock solution may be made by dissolving the MRE-269 in the solvent of choice, which should be purged with an inert gas. MRE-269 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of MRE-269 in these solvents is approximately 15, 12, and 14 mg/ml, respectively.

MRE-269 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MRE-269 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. MRE-269 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Prostacyclin (PGI_2) is a potent vasorelaxant and inhibitor of platelet aggregation. It mediates its actions by binding to a specific G protein-coupled receptor, the IP receptor, on the surface of endothelial cells, arterial smooth muscle, and platelets.[1] The IP receptor also participates in signal transduction of the pain response, cardioprotection, and inflammation.[2-5] MRE-269 is the active form of the prodrug NS-304. It is a potent and selective agonist for the human IP receptor with a K_i value of 20 nM.[6] In contrast to PGI_2, which has a half-life of 30 seconds to a few minutes *in vivo*, plasma concentrations of MRE-269 remain near peak levels for more than eight hours in rats and dogs.[6] Unlike the PGI_2 analogues, beraprost and iloprost, MRE-269 lacks high affinity for the EP_3 receptor.[7] As a result, MRE-269 induces vasodilation equally in large and small pulmonary arteries, whereas vasodilation of small arteries by beraprost and iloprost is reduced *via* EP_3-mediated vasoconstriction.[7]

References

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